We claim:

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A benzoyl-substituted phenylalanineamide of the formula I

$$R^{11}$$
 $R^{12}$ 
 $R^{13}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{7}$ 
 $R^{8}$ 
 $R^{15}$ 
 $R^{15}$ 
 $R^{15}$ 
 $R^{15}$ 

- 5 in which the variables are as defined below:
  - R<sup>1</sup> is halogen, cyano, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkoxy, nitro, hydroxycarbonyl, C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>-haloalkylthio or phenyl;
- 10 R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup> are hydrogen, halogen, cyano, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-haloalkoxy, nitro, amino, C<sub>1</sub>-C<sub>6</sub>-alkylamino, di(C<sub>1</sub>-C<sub>6</sub>-alkyl)amino, C<sub>1</sub>-C<sub>6</sub>-alkylthio or C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl;
  - $R^6$ ,  $R^7$  are hydrogen, hydroxyl or  $C_1\text{-}C_6\text{-alkoxy}$ ;

 $R^8$  is  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_4$ -cyanoalkyl or  $C_1$ - $C_6$ -haloalkyl;

 $R^9$  is  $OR^{16}$ ,  $SR^{17}$  or  $NR^{18}R^{19}$ ;

20  $R^{10}$  is hydrogen or  $C_1$ - $C_6$ -alkyl;

R<sup>11</sup>, R<sup>12</sup> are hydrogen, halogen, cyano, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, hydroxyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-haloalkoxy, hydroxyl, nitro, hydroxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, tri(C<sub>1</sub>-C<sub>6</sub>-alkyl)silyloxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkylthio, (hydroxycarbonyl)-C<sub>1</sub>-C<sub>6</sub>-alkyl, (C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl)-C<sub>1</sub>-C<sub>6</sub>-alkyl, (hydroxycarbonyl)-C<sub>2</sub>-C<sub>6</sub>-alkenyl, (C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl)-C<sub>2</sub>-C<sub>6</sub>-alkenyl, (hydroxycarbonyl)-C<sub>1</sub>-C<sub>4</sub>-alkoxy, (C<sub>1</sub>-C<sub>4</sub>-alkoxycarbonyl)-C<sub>1</sub>-C<sub>4</sub>-alkoxy, (C<sub>1</sub>-C<sub>4</sub>-alkylcarbonyl)oxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, hydroxycarbonyl-C<sub>1</sub>-C<sub>4</sub>-alkoxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, (C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl)oxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkoxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, (C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl)oxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-C<sub>1</sub>-C<sub>4</sub>-alkyl-O-alkyl-C<sub>1</sub>-C<sub>4</sub>-

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C(O)-[ $C_1$ - $C_4$ -alkyl-O]<sub>3</sub>- $C_1$ - $C_4$ -alkyl, carbamoyloxy- $C_1$ - $C_4$ -alkyl, ( $C_1$ - $C_4$ -alkylaminocarbonyl)oxy- $C_1$ - $C_4$ -alkyl, [di( $C_1$ - $C_4$ -alkyl)aminocarbonyl]oxy- $C_1$ - $C_4$ -alkyl, [( $C_1$ - $C_4$ -haloalkylsulfonyl)aminocarbonyl]oxy- $C_1$ - $C_4$ -alkyl, benzyloxy, where the phenyl ring may be substituted by 1 to 3 radicals from the group consisting of halogen and  $C_1$ - $C_4$ -alkyl, amino,  $C_1$ - $C_4$ -alkylamino, di( $C_1$ - $C_4$ -alkyl)amino, ( $C_1$ - $C_4$ -alkylsulfonyl)-amino,  $C_1$ - $C_4$ -(haloalkylsulfonyl)amino, ( $C_1$ - $C_4$ -alkylamino)carbonylamino, [di( $C_1$ - $C_4$ -alkyl)amino]carbonylamino, [( $C_1$ - $C_4$ -haloalkylsulfonyl)aminocarbonyl]-amino, phenyl or heterocyclyl, where the phenyl and the heterocyclyl radical of the two last-mentioned substituents may carry 1 to 3 radicals from the following group: halogen, nitro,  $C_1$ - $C_4$ -alkyl,  $C_1$ - $C_4$ -haloalkyl, hydroxycarbonyl and  $C_1$ - $C_6$ -alkoxycarbonyl;

R<sup>13</sup>, R<sup>14</sup>, R<sup>15</sup> are hydrogen, halogen, cyano, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-haloalkoxy, nitro, hydroxyl, C<sub>1</sub>-C<sub>4</sub>-alkylthio or benzyloxy;

R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup> are hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, tri(C<sub>1</sub>-C<sub>6</sub>-alkyl)silyl, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, C<sub>3</sub>-C<sub>6</sub>-alkenyl, C<sub>3</sub>-C<sub>6</sub>-alkynyl, C<sub>3</sub>-C<sub>6</sub>-haloalkenyl, C<sub>3</sub>-C<sub>6</sub>-haloalkynyl, formyl, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyl, C<sub>3</sub>-C<sub>6</sub>-cycloalkylcarbonyl, C<sub>2</sub>-C<sub>6</sub>alkenylcarbonyl, C<sub>2</sub>-C<sub>6</sub>-alkynylcarbonyl, C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl, C<sub>3</sub>-C<sub>6</sub>alkenyloxycarbonyl, C<sub>3</sub>-C<sub>6</sub>-alkynyloxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkylaminocarbonyl, C<sub>3</sub>-C<sub>6</sub>-alkenylaminocarbonyl, C<sub>3</sub>-C<sub>6</sub>alkynylaminocarbonyl, C<sub>1</sub>-C<sub>6</sub>-alkylsulfonylaminocarbonyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfonylaminocarbonyl, di(C<sub>1</sub>-C<sub>6</sub>-alkyl)aminocarbonyl, N-(C<sub>3</sub>-C<sub>6</sub>alkenyl)-N-(C<sub>1</sub>-C<sub>6</sub>-alkyl)aminocarbonyl, N-(C<sub>3</sub>-C<sub>6</sub>-alkynyl)-N-(C<sub>1</sub>-C<sub>6</sub>alkyl)aminocarbonyl, N-(C<sub>1</sub>-C<sub>6</sub>-alkoxy)-N-(C<sub>1</sub>-C<sub>6</sub>-alkyl)aminocarbonyl, N-(C<sub>3</sub>-C<sub>6</sub>-alkenyl)-N-(C<sub>1</sub>-C<sub>6</sub>-alkoxy)aminocarbonyl, N-(C<sub>3</sub>-C<sub>6</sub>-alkynyl)-N-(C<sub>1</sub>-C<sub>6</sub>-alkoxy)aminocarbonyl, di(C<sub>1</sub>-C<sub>6</sub>-alkyl)aminothiocarbonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl-C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxyimino-C<sub>1</sub>-C<sub>6</sub>-alkyl, N-(C<sub>1</sub>-C<sub>6</sub>alkylamino)imino-C<sub>1</sub>-C<sub>6</sub>-alkyl or N-(di-C<sub>1</sub>-C<sub>6</sub>-alkylamino)imino-C<sub>1</sub>-C<sub>6</sub>alkyl,

where the alkyl, cycloalkyl and alkoxy radicals mentioned may be partially or fully halogenated and/or may carry 1 to 3 of the following groups: cyano, hydroxyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_1$ - $C_4$ -alkylthio, di( $C_1$ - $C_4$ -alkyl)amino,  $C_1$ - $C_4$ -alkylcarbonyl,

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hydroxycarbonyl,  $C_1$ - $C_4$ -alkoxycarbonyl, aminocarbonyl,  $C_1$ - $C_4$ -alkylaminocarbonyl, di( $C_1$ - $C_4$ -alkyl)-aminocarbonyl or  $C_1$ - $C_4$ -alkylcarbonyloxy;

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phenyl, phenyl- $C_1$ - $C_6$ -alkyl, phenylcarbonyl, phenylcarbonyl- $C_1$ - $C_6$ -alkyl, phenoxycarbonyl, phenylaminocarbonyl, phenylsulfonylaminocarbonyl, N- $(C_1$ - $C_6$ -alkyl)-N-(phenyl)aminocarbonyl, phenyl- $C_1$ - $C_6$ -alkylcarbonyl, heterocyclyl, heterocyclyl- $C_1$ - $C_6$ -alkyl, heterocyclylcarbonyl, heterocyclylcarbonyl- $C_1$ - $C_6$ -alkyl, heterocyclyloxycarbonyl, heterocyclylaminocarbonyl, heterocyclylsulfonylaminocarbonyl, N- $(C_1$ - $C_6$ -alkyl)-N-(heterocyclyl)aminocarbonyl or heterocyclyl- $C_1$ - $C_6$ -alkylcarbonyl,

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where the phenyl and the heterocyclyl radical of the 17 lastmentioned substituents may be partially or fully halogenated and/or may carry 1 to 3 of the following groups: nitro, cyano,

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 $C_1$ - $C_4$ -alkyl,  $C_1$ - $C_4$ -haloalkyl,  $C_1$ - $C_4$ -alkoxy or  $C_1$ - $C_4$ -haloalkoxy  $SO_2R^{20}$ ; -C(O)-[ $C_1$ - $C_4$ -alkyl-O]<sub>3</sub>- $C_1$ - $C_4$ -alkyl; or

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-C(O)-O- $C_1$ - $C_4$ -alkyl-O-phenyl, where the phenyl radical may optionally be substituted by 1 to 3 radicals from the group consisting of halogen and  $C_1$ - $C_4$ -alkyl;

 $R^{19}$ 

is hydrogen,  $C_1$ - $C_6$ -alkyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_3$ - $C_6$ -alkenyl,  $C_3$ - $C_6$ -alkynyl,  $C_3$ - $C_6$ -haloalkenyl,  $C_3$ - $C_6$ -haloalkynyl,

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where the alkyl and cycloalkyl radicals mentioned may be partially or fully halogenated and/or may carry 1 to 3 of the following groups: cyano, hydroxyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_1$ - $C_4$ -alkoxy,  $C_1$ - $C_4$ -alkylthio, di( $C_1$ - $C_4$ -alkyl)amino,  $C_1$ - $C_4$ -alkylcarbonyl, hydroxycarbonyl,  $C_1$ - $C_4$ -alkoxycarbonyl, aminocarbonyl,  $C_1$ - $C_4$ -alkylaminocarbonyl, di( $C_1$ - $C_4$ -alkyl)aminocarbonyl or  $C_1$ - $C_4$ -alkylcarbonyloxy; or

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phenyl, phenyl-C<sub>1</sub>-C<sub>6</sub>-alkyl, heterocyclyl or heterocyclyl-C<sub>1</sub>-C<sub>6</sub>-alkyl, where the phenyl and the heterocyclyl radical of the 4 last-mentioned substituents may be partially or fully halogenated, and/or may carry 1 to 3 of the following groups: nitro, cyano, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-haloalkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy or C<sub>1</sub>-C<sub>4</sub>-haloalkoxy;

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 $R^{20}$  is  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl or phenyl,

where the phenyl radical may be partially or fully halogenated and/or may carry 1 to 3 of the following groups:  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl or  $C_1$ - $C_6$ -alkoxy;

- 5 or an agriculturally useful salt thereof.
  - 2. The benzoyl-substituted phenylalanineamide of the formula I according to claim 1, where  $R^1$  is halogen or  $C_1$ - $C_6$ -haloalkyl.
- The benzoyl-substituted phenylalanineamide of the formula according to claim 1 or 2, where R<sup>2</sup> and R<sup>3</sup> independently of one another are hydrogen, halogen or C<sub>1</sub>-C<sub>6</sub>-haloalkyl.
- 4. The benzoyl-substituted phenylalanineamide of the formula I according to any of claims 1 to 3, where R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>10</sup>, R<sup>13</sup>, R<sup>14</sup> and R<sup>15</sup> are hydrogen.
  - 5. The benzoyl-substituted phenylalanineamide of the formula I according to any of claims 1 to 4, where R<sup>9</sup> is OR<sup>16</sup>.
- 20 6. A process for preparing benzoyl-substituted phenylalanineamides of the formula I according to claim 1, which comprises

reacting phenylalanines of the formula V

$$R^{12}$$
 $R^{13}$ 
 $R^{10}$ 
 $R^{14}$ 
 $R^{9}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{16}$ 
 $R^{16}$ 

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where  $R^6$  and  $R^9$  to  $R^{15}$  are as defined in claim 1 and  $L^1$  is a nucleophilically displaceable leaving group,

30 with benzoic acids or benzoic acid derivatives of the formula IV

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where  $R^1$  to  $R^5$  are as defined in claim 1 and  $L^2$  is a nucleophilically displaceable leaving group

to give the corresponding benzoyl derivatives of the formula III

$$R^{10}$$
 $R^{10}$ 
 $R^{10}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{15}$ 
 $R^{10}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R$ 

where R<sup>1</sup> to R<sup>6</sup> and R<sup>9</sup> to R<sup>15</sup> are as defined in claim 1 and L<sup>1</sup> is a nucleophilically displaceable leaving group

and then reacting the resulting benzoyl derivatives of the formula III with an amine of the formula II

HNR7R8 II,

where R<sup>7</sup> and R<sup>8</sup> are as defined in claim 1.

7. The process for preparing benzoyl-substituted phenylalanineamides of the formula I according to claim 6, where R<sup>9</sup> is hydroxyl and R<sup>10</sup> is hydrogen, which comprises converting benzoyl derivatives of the formula III where R<sup>9</sup> is hydroxyl and R<sup>10</sup> is hydrogen by acylation of keto compounds of the formula XIII

where  $R^6$  and  $R^{11}$  to  $R^{15}$  are as defined in claim 1 and  $L^1$  is a nucleophilically displaceable leaving group

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with benzoic acids/benzoic acid derivatives of the formula IV into N-acyl keto compounds of the formula XII

$$R^{11}$$
 $R^{12}$ 
 $R^{13}$ 
 $R^{14}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R$ 

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where  $R^1$  to  $R^6$  and  $R^{11}$  to  $R^{15}$  are as defined in claim 1 and  $L^1$  is a nucleophilically displaceable leaving group, followed by reduction of the keto group.

## 15 8. A benzoyl derivative of the formula III

$$R^{10}$$
 $R^{10}$ 
 $R^{10}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{14}$ 
 $R^{15}$ 
 $R^{15}$ 
 $R^{15}$ 
 $R^{15}$ 
 $R^{15}$ 
 $R^{15}$ 
 $R^{15}$ 

where R<sup>1</sup> to R<sup>6</sup> and R<sup>9</sup> to R<sup>15</sup> are as defined in claim 1 and L<sup>1</sup> is a nucleophilically displaceable leaving group.

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9. A composition, comprising a herbicidally effective amount of at least one benzoyl-substituted phenylalanineamide of the formula I or an agriculturally useful salt of I according to any of claims 1 to 5 and auxiliaries customary for formulating crop protection agents.

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10. A process for preparing compositions according to claim 8, which comprises mixing a herbicidally effective amount of at least one benzoyl-substituted phenylalanineamide of the formula I or an agriculturally useful salt of I according to any of claims 1 to 5 and auxiliaries customary for formulating crop protection agents.

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11. A method for controlling unwanted vegetation, which comprises allowing a herbicidally effective amount of at least one benzoyl-substituted phenylalanineamide of the formula I or an agriculturally useful salt of I according to any of claims 1 to 5 to act on plants, their habitat and/or on seed.

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12. The use of a benzoyl-substituted phenylalanineamide of the formula I according to any of claims 1 to 5 or an agriculturally useful salt thereof as a herbicide.